

school in Nashville, Tenn. In 1857 he resigned this to accept an appointment as assistant in the preparation of the Nautical Almanac, and thereupon removed to Cambridge, Mass. His subsequent career is well known until the time he left the Government service in 1887. After that he made his home in Kansas City, Mo.

While visiting a sister in Martinsburg, W. Va., he was attacked by "Grippe," from which he never fully recovered. Later he was attacked by dropsy, which was the immediate cause of his death. Three months before his death he went west on a visit to his nephew-in-law, C. M. Tabler, Maywood, Kans., but death was in close pursuit and he never returned.

William Ferrel was of Scotch-Irish descent. His grandfather came from the north of Ireland to Pennsylvania and married an English woman named Veach. Their son, Benjamin, married Nancy Miller, whose union was blessed with 8 children, the professor being the eldest. Professor Ferrel was a man actuated by a single and serious purpose, to accomplish which, he labored with unswerving fidelity. From his boyhood years until old age and disease combined to give his ceaseless spirit rest, his life was one long line of direct purpose and pursuit in the interest of science. He was a man of extreme diffidence and seclusion, who made companions of books, and found pleasure in studying the problems of nature rather than in the social circle of relatives and friends. His whole career shows not the slightest tinge of romance or sentimentality. Humor or frivolity found no lodging in his master mind. The "little nonsense now and then" alleged to be "relished by the wisest men," was not appreciated by this philosopher. He was a man without prejudice or wordly greed; without "hobbies" or side issues. He met with obstacles to the fruition of cherished plans, yet disappointments did not discourage him.

In early life he joined the Campbellite Church (a reason given for his having entered Bethany College, whose founder was Alexander Campbell, founder of the Campbellite Church), but in later years he adopted Unitarianism, and after going to Kansas City to reside permanently, he attended that church.

At the time of his death, a conservative estimate of his estate, not including his library, placed it at about \$30,000, invested in improved and unimproved property in Kansas City, Mo., Hutchinson, Kans., Richhill, Mo., and Washington, D. C.

MEXICAN CLIMATOLOGICAL DATA.

Through the kind cooperation of Señor Mariano Bárcena, Director, and Señor José Zendejas, vice-director, of the Central Meteorologico-Magnetic Observatory, the monthly summaries of Mexican data are now communicated in manuscript, in advance of their publication in the *Boletín Mensual*; an abstract translated into English measures is here given in continuation of the similar tables published in the MONTHLY WEATHER REVIEW since 1896. The barometric means have not been reduced to standard gravity, but this correction will be given at some future date when the pressures are published on our Chart IV.

Mexican data for October, 1898.

Stations.	Altitude.	Mean barometer.	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
Leon (Guanajuato)...	5,934	24.32	80.1	37.2	58.1	54	0.77	ene.	ne., e.
Linares (New Leon)...	1,188	28.76	93.2	44.6	75.0	70	T.	sse.	ne.
Mazatlan.....	25	29.82	90.0	71.8	83.0	80	9.25	nw.	ne.
Merida (Yucatan)....	50	29.90	96.8	61.9	77.0	81	6.87	n.	n.
Mexico (Obs. Cent.)...	7,472	23.09	74.3	38.3	57.7	62	0.21	nw.	ne.
Morelia (Seminario)...	6,401	23.99	77.4	41.5	61.5	69	0.57	ene.	e.
Oaxaca.....	5,164	25.08	84.0	42.4	66.2	66	0.88	nw.	ne.
Puebla (Col. Cat.)...	7,112	23.32	77.9	34.7	60.8	65	2.35	nne.	s.
San Isidro.....	.....	.....	75.2	55.4	.....	.....	0.47	ne., s.	.....
Tuxpan (Vera Cruz)...	30.32	93.2	54.0	75.7	78	1.31	.....	ne., nw.	e.
Zacatecas.....	8,015	22.54	80.6	32.7	59.0	62	0.61	e.	e.

OBSERVATIONS AT PORT AU PRINCE, HAITI.

Through the kind cooperation of Prof. T. Scherer of Port au Prince, Haiti, the meteorological observations taken by him at 7^h 12^m a. m., local time, or noon, Greenwich time, are communicated in manuscript for early publication in the MONTHLY WEATHER REVIEW. The original reports are in metric measures; the conversions are by the Editor.

The barometer is 119 feet above sea level; its readings have been corrected by Professor Scherer for temperature and elevation, and also since July 1, 1898, for gravity; this latter correction is -0.064 inch; the thermometers are 6.7 feet above ground; the rain gauge, 7.2 feet above ground. The wind velocity is given in miles per hour.

The position of Port au Prince, Haiti, is latitude 18° 34' N., longitude 72° 21' W., or 4^h 49^m west of Greenwich. Additional records for this station are published in the annual volumes of the Central Meteorological Institute at Vienna.

Observations at Port au Prince, Haiti.

SEPTEMBER, 1898.

Date.	Pressure.		Temperature.			Rel. humidity.	Wind.		Clouds.			Preceding 24 hours.		
	Local.	Sea level.	Dry.	Wet.	Dew-point.		Direction.	Velocity.	Kind.	Amount.	Direction.	Temperature.		Total rain.
												Max.	Min.	
	Inch.	Inch.	°	°	°	%						°	°	Inch.
1.....	29.84	29.96	78.6	72.1	68.2	73	e.	2	cs	0	.....	89.6	73.1	0.00
2.....	29.82	29.94	79.5	73.4	69.8	73	e.	2	cs	1	.....	94.3	72.3	0.09
3.....	29.80	29.93	73.4	70.2	68.2	84	.....	0	cs	1	.....	89.2	75.0	0.10
4.....	29.82	29.94	77.2	73.2	70.9	82	ese.	7	cs	1	e.	93.2	72.9	0.00
5.....	29.87	29.99	79.5	72.7	68.5	70	se.	9	cs	1	.....	91.3	72.5	0.00
6.....	29.85	29.98	74.3	72.3	71.2	90	.....	0	s	1	e.	94.3	72.5	0.00
7.....	29.80	29.93	74.5	70.3	67.6	80	se.	5	k	1	.....	90.3	71.6	0.00
8.....	29.80	29.93	73.9	70.0	67.3	87	.....	0	k	1	.....	90.0	70.0	0.00
9.....	29.80	29.93	73.8	72.9	74.1	97	e.	2	k	9	.....	91.9	70.5	0.47
10.....	29.80	29.92	77.9	72.9	69.8	77	e.	2	ks	3	e.	85.3	70.3	0.00
11.....	29.78	29.91	79.8	71.6	70.3	99	.....	0	cs	6	nw.	94.8	70.5	0.04
12.....	29.75	29.88	75.7	74.5	73.8	94	.....	0	cs	1	nw.	91.9	71.4	0.19
13.....	29.75	29.88	73.4	72.7	72.3	96	e.	2	s	1	.....	90.1	72.1	0.00
14.....	29.74	29.87	76.3	74.1	72.7	90	.....	0	k	0	wnw.	87.4	71.1	0.00
15.....	29.71	29.84	77.2	74.8	73.6	90	.....	0	.....	0	.....	88.2	73.2	0.00
16.....	29.76	29.89	77.4	74.8	71.8	83	.....	0	k	1	.....	88.2	74.7	0.00
17.....	29.76	29.95	79.0	74.7	72.3	87	ese.	5	cs, k	2	e, se.	91.8	73.1	0.00
18.....	29.84	29.96	76.3	74.8	73.8	91	.....	0	k	6	sw, s.	90.3	75.9	0.64
19.....	29.81	29.93	78.1	73.0	70.2	77	e.	5	cs	1	.....	90.3	73.8	0.00
20.....	29.83	29.96	75.6	71.2	68.5	80	e.	2	k	6	ssw	90.3	73.0	0.10
21.....	29.80	29.93	75.6	70.9	68.0	78	.....	0	k	10	.....	87.6	71.4	0.00
22.....	29.81	29.93	75.9	73.9	72.9	91	.....	0	k	3	ne.	87.6	72.3	0.00
23.....	29.75	29.88	72.9	72.1	71.6	95	se.	2	cs	3	.....	88.9	74.1	1.34
24.....	29.76	29.89	74.5	73.0	72.1	92	.....	0	k, n	10	.....	86.7	69.1	0.19
25.....	29.76	29.89	75.2	72.1	70.2	85	e.	5	k	9	ssw.	85.3	72.7	0.00
26.....	29.76	29.89	75.2	72.3	70.5	86	.....	0	cs	1	.....	89.6	72.0	0.00
27.....	29.77	29.89	75.9	73.0	71.4	86	.....	0	cs	1	.....	89.6	71.6	0.00
28.....	29.75	29.88	76.3	74.8	73.7	87	e.	7	cs	5	n.	89.4	72.0	0.00
29.....	29.71	29.84	76.8	75.0	73.9	91	.....	0	k, es	5	w, n.	88.7	75.6	0.00
30.....	29.65	29.77	76.5	75.7	73.8	92	se.	5	cs	1	.....	87.3	73.9	0.00
Sum.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.15
Means	29.78	29.91	76.1	73.0	71.1	85.0	.....	2.0	.....	3.2	.....	89.4	72.3	.....

NOTE.—According to the new form recently received from the Weather Bureau the above barometric pressure, reduced to sea level, has also received the correction -1.57 millimeters for reduction to standard gravity. This correction was first applied for the month of July, and will be so continued hereafter.—T. S.

[Apparently the gravity correction has also been applied by Professor Scherer to the barometric readings before reduction to sea level, so that in these columns we have the true local pressure as well as the true sea-level pressure. This is in accordance with the instructions on Form 1040, which read as follows:

"Under local pressure enter the observed reading of the barometer after correcting for all known sources of instrumental error, including capillarity, error of scale or zero point, temperature of scale or mercury, or of the vacuum box in the case of an aneroid, and the variations of the force of gravity from normal gravity. If any of these corrections are unknown or unattended to, please state that fact."—Ed.]

The barometer is corrected for temperature, instrumental error and gravity, and reduced to sea level for a height of 37 meters.

OBSERVATIONS AT HONOLULU.

Through the kind cooperation of Mr. Curtis J. Lyons, Meteorologist to the Government Survey, the monthly report of meteorological conditions at Honolulu is now made nearly in accordance with the new form, No. 1040, and the arrangement of the columns, therefore, differs from those previously published.

Meteorological observations at Honolulu.

SEPTEMBER, 1898.

The station is at 21° 18' N., 157° 50' W.; altitude 50 feet.

Pressure is corrected for temperature and reduced to sea level, and the gravity correction, -0.06, has been applied.

The average direction and force of the wind and the average cloudiness for the whole day are given unless they have varied more than usual, in which case the extremes are given. The scale of wind force is 0 to 10. Two directions of wind, or values of wind force, connected by a dash, indicate change from one to the other.

The rainfall for twenty-four hours is now given as measured at 1 p. m. Greenwich time on the respective dates.

The rain gauge, 8 inches in diameter, is 1 foot above ground. Thermometer, 9 feet above ground. Ground is 50 feet above sea level.

Date.	Pressure at sea level.		Temperature.		During preceding twenty-four hours.								Sea-level pressures.	
					Temperature.		Means.		Wind.		Total rainfall.	Average cloudi- ness.		
	Dry bulb.	Wet bulb.	Maximum.	Minimum.	Dew Point.	Relative humidity.	Prevailing direction.	Maximum force.						
1	29.92	74	87	82	73	65	67	ne.	3	0.16	6	30.02	29.92	
2	29.94	74	87	82	71	64	64	ne.	4	0.03	6	29.94	29.86	
3	29.88	68	86	84	72	65	68	nne.	2	0.00	3	29.92	29.82	
4	29.92	71	88	84	74	65	70	ne.	3	0.00	3	29.95	29.88	
5	29.97	74	88	84	71	65	64	ne.	3	0.00	2	29.99	29.93	
6	29.97	73	89	84	72	66	66	ene.	3	0.00	2	29.99	29.91	
7	29.98	76	88.5	83	73	66	67	nne.	3	0.01	3	29.98	29.90	
8	29.99	73	89	83	72	65	67	ene.	3	0.03	13	30.01	29.93	
9	29.95	72	88.5	82	72	65	69	ene-n.	3	0.05	10	29.99	29.93	
10	29.96	69	87	84	70	65	69	nne.	3	0.00	1	29.99	29.90	
11	29.99	69	87	84	67	67	74	ne.	3	0.00	3	30.01	29.92	
12	29.98	74	86	85	66	64.5	62	ne.	3	0.01	3	30.03	29.92	
13	29.96	74	89	83	73	66.5	70	ene.	4	0.04	4	30.03	29.95	
14	29.98	76	88	83	72	66	68	eue.	5	0.01	7	30.02	29.95	
15	29.97	76	88	84	75	65.5	63	nne.	6	0.01	6	30.01	29.93	
16	29.92	75	87	83	74	67	66	ene-nne	4	0.04	4	29.97	29.89	
17	29.89	75	88	83	73	66	65	nne.	4	0.00	6	29.94	29.86	
18	29.95	74	88	84	75	65	64	ne.	3	0.00	3-1	29.95	29.86	
19	29.99	74	88	84	74	65.5	65	ne.	3	0.02	3-2	29.99	29.92	
20	30.00	75	88	84	71	65.5	65	ne.	3	0.01	6	30.06	29.97	
21	30.00	74	89	83	73	65	67	ne.	3-0	0.05	6	30.07	29.97	
22	30.03	74	88	83	71	65	66	ne.	4	0.06	5	30.08	30.00	
23	30.03	75	88	83	72	65.5	67	ne.	3	0.05	3	30.08	30.00	
24	29.98	72	87	83	74	66	69	ne.	3	0.04	2	30.07	29.97	
25	29.98	71	87	83	71	65	66	ene.	3	0.01	5	30.02	29.94	
26	29.95	75	88	82	70	67.5	72	ene.	2	0.10	6	30.02	29.94	
27	29.92	73	89	82	72	68	75	nne.	3	0.21	8	30.00	29.91	
28	29.94	74	88	83	70	67.5	72	ne.	3	0.16	6	29.98	29.89	
29	29.94	75	88	83	72	69	77	ene.	5	0.08	6	29.98	29.90	
30	29.99	76	89	84	74	67	71	ene.	5	0.10	8	30.02	29.95	
Sums.										1.22				
Means.	29.97	73.2		83.3	71.6	65.8	67.8				4.6	30.00	29.92	

Monthly mean temperature (6+2+9)÷3 is 77.2, and the normal mean is 77.3.

OCTOBER, 1898.

	*	+	+																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
--	---	---	---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Mean temperature for October (6+2+9)÷3=76.3; normal is 76.6. Mean pressure for October is 29.98; normal is 29.97.

*This pressure is as recorded at 1 p. m., Greenwich time. †These temperatures are observed at 6 a. m., local, or 4:30 p. m., Greenwich time. ‡Beaufort scale. §Mean for the daytime is 3.0. ¶The mean during daylight is 4.8.

OBSERVATIONS AT RIVAS, NICARAGUA.

The records contributed for many years by Dr. Earl Flint, at Rivas, Nicaragua, include barometric readings. His present station is at 11° 26' N., 85° 47' W. The observations at 7:17 a. m., local time are simultaneous with Greenwich 1 p. m. The altitude of his barometer is 36 meters above sea level, but until the barometer has been compared with a standard it seems hardly necessary to publish the daily readings. The wind force is recorded on the Beaufort scale, 0-12. When cloudiness is less than $\frac{1}{10}$, the letter "F," or "Few," is recorded.

This station is situated on the western shore of Lake Nicaragua, not far from the eastern end of the western division of the Nicaragua Canal. The volcano Ometepe, on an island in Lake Nicaragua, is about 10 miles northeast of the station. Mr. Flint's records occasionally mention the presence of clouds in the early morning on the summit of this mountain.

Observations at Rivas, Nicaragua, October, 1898.

OBSERVATIONS AT 7:17 A. M. LOCAL (8 A. M. EASTERN STANDARD) TIME.

Date.	Temperature.		Wind.		Upper clouds.			Lower clouds.			Daily rainfall.
	Air.	Dew-point.	Direction.	Force.	Kind.	Amount.	Direction from.	Kind.	Amount.	Direction from.	
1	76	73	sw.	0	c.	4	sw.	k.	4	sw.	0.09
2	76.5	75	se.	0	c.	5	se.	k.	5	se.	0.34
3	76	75	se.	0	c.	5	se.	k.	5	se.	1.60
4	75	75	se.	1	.....	.....	.....	k.	10	se.	0.55
5	75	74	sw.	0	cs.	10	se.	n.	10	se.	0.09
6	75	73	se.	0	.....	.....	.....	ks.	8	se.	0.23
7	76	73	nw.	0	.....	.....	.....	k.	8	se.	0.08
8	76.5	73	sw.	0	c.	10	sw.	ks.	10	sw.	1.91
9	75	73	sw.	0	.....	.....	.....	n.	10	sw.	0.80
10	75	70	sw.	2	.....	.....	.....	n.	10	se.	0.63
11	75	73	sw.	0	c.	9	sw.	k.	9	sw.	0.43
12	74	71	w.	0	cs.	5	se.	.....	.....	.....	0.00
13	76	73	sw.	0	.....	.....	.....	k.	10	sw.	0.00
14	76	73	sw.	0	.....	.....	.....	k.	10	sw.	1.57
15	75	73	se.	0	.....	.....	.....	k.	10	se.	1.65
16	76	74	se.	0	.....	.....	.....	k.	10	se.	2.56
17	76	75	se.	0	.....	.....	.....	k.	10	se.	0.00
18	76	73	sw.	1	.....	.....	.....	n.	10	sw.	0.30
19	76	74	se.	1	.....	.....	.....	n.	10	sw.	0.89
20	76	74	sw.	0	.....	.....	.....	k.	10	sw.	1.22
21	76	73	sw.	0	.....	.....	.....	k.	10	sw.	1.75
22	75	73	sw.	0	.....	.....	.....	k.	10	se.	1.78
23	75	74	se.	0	.....	.....	.....	ks.	10	se.	0.00
24	77	74	se.	0	.....	.....	.....	ks.	10	se.	0.12
25	77	74	se.	0	.....	.....	.....	k.	10	se.	0.47
26	77	73	s.	0	.....	.....	.....	k.	10	se.	0.00
27	74	72	se.	0	cs.	Few	se.	.....	.....	.....	0.00
28	74	72	sw.	0	.....	.....	.....	ks.	10	se.	0.98
29	73	60	se.	0	c.	Few	se.	.....	.....	.....	0.00
30	75	73	sw.	0	c.	1	sw.	k.	6	ne.	0.79
31	75	73	sw.	0	cs.	5	sw.	.....	.....	.....	0.00
Means ..	75.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....